FIREFIGHTER II MOD A
LADDERS

2-6 LADDERS

2-6.1 Identify, from pictures or actual ladders, the following types of ladders: (*3-3.5*)
- **2-6.1** Folding/attic
- **2-6.2** Roof
- **2-6.3** Extension
- **2-6.4** Straight/wall
- **2-6.5** Aerial devices

2-6.2 Identify various components of ladders. (*3-3.5*)

2-6.3 Identify the use of each of the following types of ladders: (*3-3.5*)
- **2-6.3.1** Folding/attic
- **2-6.3.2** Roof
- **2-6.3.3** Extension
- **2-6.3.4** Straight/wall
- **2-6.3.5** Aerial devices

2-6.4 Identify criteria to ensure safe ladder operation.

2-6.5 Identify the procedure for cleaning and maintaining the following types of ladders: *(3-3.5)*
- **2-6.5.1** Folding/attic
- **2-6.5.2** Roof
- **2-6.5.3** Extension
- **2-6.5.4** Straight/wall
- **2-6.5.5** Aerial devices

2-6.6 Identify the inspection procedures for the following types of ladders: *(3-3.5)*
- **2-6.6.1** Folding/attic
- **2-6.6.2** Roof
- **2-6.6.3** Extension
- **2-6.6.4** Straight/wall
- **2-6.6.5** Aerial devices

2-6.7 Identify the following firefighter carries using ground ladders: (*3-3.5(b), 3-3.11(b*))
- **2-6.7.1** One-firefighter low-shoulder method
- **2-6.7.2** One-firefighter high-shoulder method
- **2-6.7.3** Two-firefighter low-shoulder method
- **2-6.7.4** Three-firefighter flat-shoulder method
- **2-6.7.5** Three-firefighter flat arm's length method
- **2-6.7.6** Four-firefighter flat arm's length method
- **2-6.7.7** Ladder placement for ventilation
- **2-6.7.8** Ladder placement for rescue from a window
- **2-6.7.9** Ladder placement for hose stream deployment

2-6.8 Identify positioning, raising, and lowering the following ground ladders for rescue, ventilation and hose deployment: *(3-3.5, 3-3.8, 3-3.11*)
- **2-6.8.1** 14-foot single or wall ladder
- **2-6.8.2** 24-foot extension ladder
- **2-6.8.3** 35-foot extension ladder
- **2-6.8.4** Folding/attic ladder

2-6.9 Identify climbing the full length of each type of ground and aerial ladders available to the fire department. *(3-3.5, 3-3.11*)

2-6.10 Identify tool carries while ascending and descending ladders. (*3-3.5, 3-3.11*)

2-6.11 Identify the procedures for moving "injured" people down a ladder. (*3-3.5, 3-3.8*)

2-6.12 Identify the procedure for working off ladders using the appropriate safety devices and leg locks. *(3-3.5, 3-3.11*)

2-6.13 Identify the deployment of a roof ladder on a pitched roof. (*3-3.5*)

2-6.14 Identify the procedure for cleaning ladders (*3-3.5*)

2-6.15 Identify the inspection procedures for different types of ground and aerial ladders. (*3-3.5)*

2-6.16 Identify the maintenance procedures for different types of ground and aerial ladders. (*3-3.5*)

2-6.17 Demonstrate the following firefighter carries using ground ladders: (*3-3.5(b), 3-3.11(b)*)
- **2-6.17.1 One-firefighter low-shoulder method**
- **2-6.17.2 One-firefighter high-shoulder method**
- **2-6.17.3 Two-firefighter low-shoulder method**
- **2-6.17.4 Three-firefighter flat-shoulder method**
- **2-6.17.5 Three-firefighter flat arm's length method**
- **2-6.17.6 Four-firefighter flat arm's length method**
- **2-6.17.7 Ladder placement for ventilation**
- **2-6.17.8 Ladder placement for rescue from a window**
- **2-6.17.9 Ladder placement for hose stream deployment**

2-6.18 Demonstrate positioning, raising, and lowering the following ground ladders for rescue, ventilation and hose deployment: (*3-3.5(b), 3-3.8(b), 3-3.11(b)*)
- **2-6.18.1 14-foot single or wall ladder**
- **2-6.18.2 24-foot extension ladder**
- **2-6.18.3 35-foot extension ladder**
- **2-6.18.4 Folding/attic ladder**

2-6.19 Demonstrate climbing the full length of each type of ground and aerial ladders available to the fire department. (*3-3.5(b), 3-3.11(b))*

2-6.20 Demonstrate tool carries while ascending and descending ladders. (*3-3.5(b), 3-3.1(b)*)

2-6.21 Demonstrate moving "injured" people down a ladder. (*3-3.5(b), 3-3.8(b)*)

2-6.22 **Demonstrate working off ladders using appropriate safety devices and leg locks. (*3-3.5(b), 3-3.11(b)*)**

2-6.23 **Demonstrate the deployment of a roof ladder on a pitched roof. (*3-3.5(b)*)**

2-6.24 **Demonstrate the procedure for cleaning ladders. (*3-3.5(b)*)**

2-6.25 **Demonstrate the inspection procedures for different types of ground and aerial ladders. (*3-3.5(b)*)**

2-6.26 **Demonstrate maintenance procedures for different types of ground and aerial ladders. (*3-3.5(b)*)**

REFERENCES:

IFSTA, Essentials, 4th ed., Chapter 9
Delmar, Firefighter's Handbook, copyright 2000,Chapter 14
Jones & Bartlett, Fundamentals of Firefighter Skills, Chapters 12 & 13

2-6 Ladders

I. Identify, from pictures or actual ladders, the following types of ladders: **2-6.1** (*3-3.5*)

A. Folding/Attic **2-6.1**

1. Hinged rungs so one beam rests on the other
2. Usually 10 feet long
3. Equipped with safety shoes

B. Roof **2-6.2**

1. Straight ladder
2. Equipped with hooks on one end for anchoring to ridge
3. Usually 12 to 24 feet long

C. Extension **2-6.3**

1. Adjustable in length
2. Base or bed section with one or more fly sections
3. Heavier than single ladder
4. Range from 12 to 39 feet

D. Straight/wall **2-6.4**

1. Non-adjustable, 1 section
2. Usually 12, 14, 16, 18, or 24 feet in length.

E. Aerial devices **2-6.5**

1. Vehicle mounted
2. 50 to 135 feet in length
3. Divided into aerial ladders and elevated platforms

II. Identify the various components of ladders. **2-6.2** (*3-3.5*)

A. **Base section**: Bed or bottom section of an extension ladder
B. **Beam**: Side rail of a ladder
C. **Beam bolts**: Bolts that pass through both rails at the truss block of a wooden ladder to tie the two truss rails together.
D. **Butt or heel**: Bottom end of the ladder which is placed on the ground.
E. **Butt spurs**: Metal safety plates or spikes attached to the butt end of ground ladder's beams.

F. **Dogs, pawls or locks**: Devices attached to the inside of the beams of extension.
G. **Fly**: The upper or top sections of an extension ladder of aerial device.
H. **Guides**: Wood or metal strips on an extension ladder that guide the fly section while being raised.
I. **Halyard**: A rope or cable used for hoisting and lowering the fly sections of a ground ladder.
J. **Heat sensor label**: A label affixed to the ladder beam near the tip to provide a warning that the ladder has been subjected to excessive heat.
K. **Hooks**: A pair of sharp curved devices at the top of a roof ladder that fold outward from each beam.
L. **Protection plates**: Plates fastened to a ladder to prevent wear at points where it comes in contact with mounting brackets.
M. **Pulley**: A small grooved wheel through which the halyard is drawn on an extension ladder.
N. **Rails**: The lengthwise member of a trussed ladder beam that are separated by truss blocks.
O. **Rungs**: Cross members between the beams on which the climber steps.
P. **Safety shoes**: Rubber of neoprene foot plates attached to the butt end of the beams of a ground ladder.
Q. **Spurs**: Metal points at the ends of staypoles.
R. **Staypoles or tormentor poles**: The poles attached to long extension ladders to assist in raising and steadying the ladder.
S. **Stops**: Wood or metal pieces that prevent the fly section from being extended too far.
T. **Tie rods**: Metal rods running from one beam to another.
U. **Toggles**: A hinge device by which a staypole is attached to a ladder.
V. **Top or tip**: The extreme top of a ladder.
W. **Truss blocks**: Separation pieces between the rails of a trussed ladder.

III. Identify the use of each of the following types of ladders. **2-6.3** (*3-3.5*)

A. Folding/attic **2-6.3.1**

1. Attic scuttle holes
2. Small rooms
3. Closets

B. Roof **2-6.3.2**

1. Anchor ladder over ridge
2. Lies flat in on roof allowing firefighter to stand on ladder while performing roof work
3. Helps distribute firefighter's weight and prevents slipping
4. Use as single wall ladder

C. Extension **2-6.3.3**

1. Provides access to windows and roofs within limits of its length.

D. Straight/wall **2-6.3.4**

1. Quick access to windows and roofs on one and two story buildings.

E. Aerial devices **2-6.3.5**

1. Aerial ladder

a. Rescue
b. Ventilation
c. Elevated master stream application
d. Gaining access to upper levels

2. Elevating platform

a. Telescoping type
b. Articulating – hinged type
c. Platform attached to both
d. Same uses as aerial ladder

IV. Identify criteria to ensure safe ladder operations. **2-6.4** *(3-3.5)*

A. Always wear protective gear including gloves.
B. Use proper ladder for job
C. Use proper lifting techniques: ex. Leg muscles when lifting ladder from below waist level
D. Use appropriate number of personnel for carries and raises
E. Be careful not to raise ladder into electrical wires
F. Check for proper climbing angle (approx. 75%)
G. Make sure prowls are seated over the rungs
H. Ladder should be secured at top or bottom before climbing
I. Climb in a smooth and rhythmic motion
J. Be careful not to overload the ladder
K. Tie into ground ladders with a leg lock or ladder belt, if working from the ladder.
L. Inspect for damage after each use.

V. Identify the procedure for cleaning the following types of ladders: **2-6.5** *(3-3.5)*

A. Folding/attic **2-6.5.1**
B. Roof **2-6.5.2**
C. Extension **2-6.5.3**
D. Straight/wall **2-6.5.4**
E. Aerial devices **2-6.5.5**

1. Follow manufacturer's instructions
2. Set up work area
3. Remove any grease with solvent
4. Clean ladder with scrub brush and rinse
5. Wipe dry
6. Lubricate moving parts, if warranted

VI. Identify the maintenance procedures for the following types of ladders. **2-6.6** *(3-3.5)*

A. Folding/attic **2-6.6.1**
B. Roof **2-6.6.2**
C. Extension **2-6.6.3**
D. Straight/wall **2-6.6.4**
A. Aerial devices **2-6.6.5**

1. Keep clean and free of moisture
2. Do not store or rest ladders near exhaust or other heat sources
3. Do not store ladders where they are exposed to the elements
4. Do not paint ladders except for top and bottom 12" for visibility
5. Repairs should be made by trained ladder technicians

VII. Identify the following firefighter carries using ground ladders: 2-6.7 (*3-3.5, 3-3.11*)

A. One Firefighter Low Shoulder Method from the apparatus **2-6.7.1**

1. Select a balance point near the center of the ladder.
2. Faces toward the butt and inserts one arm between the beams.
3. Rests the upper beam on the shoulder
4. Steady the ladder with both hands.
5. Lower the butt (front) end slightly for better balance and vision during the carry.

B. One Firefighter Low Shoulder Carry from the ground **2-6.7.1**

1. Face toward the tip
2. Crouch beside the ladder
3. Grasp the middle rung with your hand nearest the ladder.
4. Stand, using the leg muscles and keeping the back straight and vertical.
5. As the ladder is brought up, pivot into the ladder, and insert the other arm through the rungs so that the upper beam rests on the shoulder.
6. Face toward the butt
7. Steady the ladder
8. Lower the butt (front) end slightly.

C. One Firefighter High Shoulder Method **2-6.7.2**

1. Face the butt of the ladder
2. At the balance point, place the palm of one hand under the bottom beam and the palm of the other hand on the top beam.
3. Lift the ladder
4. Rest the lower beam on the shoulder
5. Lower the butt end slightly
6. Hold the upper beam with one hand, palm down

D. Two Firefighter Low Shoulder Method (from Vertical Racking) **2-6.7.3**

1. The two firefighters stand facing the ladder
2. One firefighter (each) positions him/herself either at the tip or the butt end of the ladder.
3. Each firefighter uses both hands to grasp the ladder to remove it from the rack.
4. As soon as the ladder clears the rack, the firefighters continue to grasp the ladder with the hand nearest the butt end while they place the other arm between two rungs.
5. They then pivot, and bring the upper beam onto the shoulder.
6. The firefighter at the butt end uses one hand to push people out of the way to prevent them from being struck by the butt spur.

E. Two Firefighter Low Shoulder Method (from Flat Racking) 2-6.7.3
(Firefighter at the heel of the ladder should give all commands.)

1. As the ladder clears the rack, each firefighter grasps two rungs holding the ladder flat.
2. For ladders stored at or above shoulder level, the outside beam is lowered and the inside beam raised to the shoulder simultaneously with each firefighter pivoting and placing the arm farthest from the butt end between two rungs. If the ladder is stored below shoulder level, raise the outside beam and lower the inside one.
3. The upper beam of the ladder should now be on the firefighter's shoulders with the firefighters facing the butt end.

F. Two Firefighter Low Shoulder Method (from the Ground) **2-6.7.3**
(Firefighter at the heel of the ladder should give all commands)

1. Two firefighters position themselves on the same side of the ladder; one near the tip and the other near the heel end..
2. Each kneel next to the ladder facing the tip end.
3. Each grasp a convenient rung with the near hand, palm forward.
4. Firefighter, at the heel, gives the command to "shoulder the ladder."
5. Both stand up, using the leg muscles to lift the ladder.
6. As the ladder and the firefighters rise, the far beam is tilted upward and the firefighters pivot and place the free arm between two rungs.
7. The firefighters place the upper beam on the shoulders, facing the butt end.

G. Three Firefighter Flat Shoulder Method (from Flat Racking) **2-6.7.4**

1. As the ladder is pulled from the rack, two firefighters position themselves on one side of the ladder near each end and the other at midpoint on the opposite side.
2. All grasp the rungs and beam.
3. List the ladder clear of the apparatus and prepare to pivot toward the butt end.
4. Raise the ladder to shoulder height, while pivoting and place the beam upon the shoulders.

H. Three Firefighter Flat Shoulder Method (from the Ground) **2-6.7.4**
(Firefighter at the heel gives the commands)

1. Position themselves at one of the following positions: one side of the ladder near each end or at mid point on the opposite side.
2. Face the tip end and kneel so that his/her back is straight and the knee closest to the ladder is the one touching the ground.
3. Grasp the beam with the hand closest to the ladder.
4. Give the command "prepare to shoulder the ladder"
5. Give the command "shoulder the ladder" when everyone is ready.
6. Stand up, using their leg muscles to lift the ladder.
7. Pivot toward the butt end.
8. Place the beam upon the shoulders while facing the butt end.

I. Three Firefighter Flat Arm's Length Method **2-6.7.5**
(Firefighter at the heel gives the commands)

1. Two firefighters position themselves on one side of the ladder near each end and the other midpoint on the opposite side.
2. All three firefighters face the butt of the ladder.
3. All kneel beside the ladder with the knee closest to the ladder touching the ground.
4. Grasp the beam.
5. Give the command to "pick up the ladder".
6. Stand, using the leg muscles, to lift the ladder to the arm's length position.

J. Four Firefighter Arm's Length Method **2-6.7.6**
(Firefighter on the right side of the heel gives the commands)

1. Two firefighters position themselves near each end of the ladder on opposite sides.
2. All four firefighters face the butt of the ladder.
3. All kneel beside the ladder with the knee closes to the ladder touching the ground.
4. All grasp the beam
5. Give the command to "pick up the ladder".
6. All stand, using their leg muscles, to lift the ladder to the arm's length position.

K. Ladder placement for ventilation **2-6.7.7**

1. Position the ladder alongside the window to the windward side with the tip about even with the top of the window.
2. Place the heel of the ladder a distance of ¼ the used height from the building
3. Check climbing angle by standing on the bottom rung and grabbing the rung directly in front of them, while standing straight up, arms extended straight out in front.

L. Ladder placement for rescue from a window **2-6.7.8**

1. Place the ladder tip even with or slightly below the sill. If the window opening is wide enough to permit placing the ladder inside the window opening and sill leave room beside it to facilitate the rescue, place it so that two or three rungs extend above the sill.
2. Check climbing angle by standing on the bottom rung and grabbing the rung directly in front of them, while standing straight up, arms extended straight out in front.

M. Ladder placement for hose stream deployment **2-6.7.9**

1. Raise ladder directly in front of the window with the tip on the wall above the window opening
2. Check climbing angle by standing on the bottom rung and grabbing the rung directly in front of them, while standing straight up, arms extended straight out in front.

VIII. Identify positioning, raising, and lowering the following ground ladders for rescue, ventilation and hose deployment: **2-6.8** (*3-3.5, 3-3.8, 3-3.11*)

A. 14-foot single or wall ladder **2-6.8.1**
B. 24-foot extension ladder **2-6.8.2**
C. 35-foot extension ladder **2-6.8.3**
D. Folding/attic ladder **2-6.8.4**

1. One Firefighter Single Ladder Raise

a. Lowers the butt end to the ground.
b. Simultaneously raise the ladder to a vertical position.
c. Grasp both beams, heels the butt end of the ladder, and lowers it onto the building.

2. One Firefighter Extension Ladder Raise

    a. Lower the butt to the ground at a point determined for establishing the proper climbing angle.
    b. Visually check for obstructions before bringing the ladder to a vertical position.
    c. As the ladder is brought to a vertical position, pivot the ladder 90 degrees.
    d. Take a position facing the ladder on the side away from the building.
    e. Prepare to extend the ladder by placing one foot at the butt on one beam, and with the instep, knee and leg, steadies the ladder.
    f. Grasp the halyard and extend the fly section with a hand-over-hand motion.
    g. Check to make sure that the ladder locks are in place, when the tip is at the desired elevation.
    h. Prepare to lower the ladder by placing at least one foot against a butt spur or on the bottom rung while grasping the breams.
    i. Gently lower the ladder into the building.
    j. Roll the ladder over to position the ladder with the fly section out.

3. Tying the Halyard

    a. Wrap the excess halyard around two convenient rungs.
    b. Pull it taut
    c. Hold the halyard between the thumb and forefinger with the palm down.
    d. Turn the hand palm up and push the halyard underneath and back over the top of the rung.
    e. Grasp the halyard with the thumb and fingers, and pull it through the loop making a clove hitch.
    f. Finish the tie by making a half hitch or overhand safety on top of the clove hitch.

4. One-Firefighter Raise from the Low Shoulder Carry

    a. Place the butt end of the ladder on the ground with the butt spurs against the wall of the building.
    b. With a free hand, grasp a rung in front of the shoulder, while removing the opposite arm from between the rungs.
    c. Step beneath the ladder and grasp a convenient rung with the other hand.

d. Visually check for obstructions before bringing the ladder to a vertical position.
e. Visually check the terrain in front of them before stepping forward.
f. Advance hand-over-hand down the rungs toward the butt until the ladder is in a vertical position.
g. Extend the ladder by pulling the halyard straight down until the ladder has been raised to the desired level.
h. Check to make sure the pawls are engaged.
i. Position the ladder for climbing by pushing against an upper rung with one hand to keep the ladder against the building.
j. Grasp a lower rung with the other hand and carefully move the ladder butt out from the building to the desired location.
k. Roll the ladder to bring the fly to the out position, if necessary.

5. Two Firefighter Flat Raise

a. Heel position

1. Place the ladder but end on the ground while the firefighter at the tip rests the ladder beam on a shoulder, when the desired location for the raise has been reached.
2. Heel the ladder by standing on the bottom rung, crouch down to grasp a convenient rung or the beams with both hands, and lean back.
3. As the ladder comes to a vertical position, grasp successively higher rungs or higher on the beams until the firefighter is standing upright.
4. Face the other firefighter and heel the ladder by placing the toes against the same beam.
5. Assist in pivoting the ladder to position the fly away from the building, if it is not already in position.
6. Place one foot against a butt spur, or on the bottom rung, and grasp the beams.
7. Gently lower the ladder into the building with the assistance of the other firefighter.

b. Tip position

1. Rest the ladder beam on a shoulder, while the other firefighter places the ladder butt end on the ground when the desired location for the raise has been reached.

2. Step beneath the ladder and grasp a convenient rung with both hands while the other firefighter heels the ladder.
3. Visually check the area overhead for obstructions before bringing the ladder to a vertical position.
4. Visually check the terrain before stepping forward.
5. Advance hand-over-hand down the rungs toward the butt end until the ladder is in a vertical position.
6. Face the other firefighter and heel the ladder by placing the toes against the same beam.
7. Assist in pivoting the ladder to position the fly away from the building, if it is not already in that position. (When the ladder is pivoted, the firefighters will move as a group with the ladder. They will not just "pass" the ladder as it is pivoted.)
8. Grasp the halyard and extend the fly section with a hand-over-hand motion.
9. Check to make sure the ladder locks are in place when the tip is at the desired elevation.
10. Gently lower the ladder into the building with the assistance of the other firefighter.

6. Two Firefighter Beam Raise

a. Heel position

1. Place the ladder beam on the ground when the desired location has been reached.
2. Place one foot on the lower beam at the butt spur.
3. Assist in pivoting the ladder to position the fly away from the building if it is not already in position.
4. Place one foot against a butt spur, or on the bottom rung, and grasp the rung or beams.
5. Gently lower the ladder into the building with the assistance of the other firefighter.

b. Tip position

1. Rest the beam on one shoulder while the firefighter at the heel places one foot on the lower beam at butt spur.
2. Grasp the upper beam with hands apart. The other foot extended back to act as a counter balance.
3. Visually check the area overhead for obstructions before bringing the ladder to a vertical position.
4. Visually check terrain before stepping forward.

5. Advance hand-over-hand down the beam toward the butt until the ladder is in a vertical position.
6. Grasp the halyard and extend the fly section with a hand-over-hand motion.
7. Check to make sure the ladder locks are in place when the tip is at the desired elevation.
8. Gently lower the ladder into the building with the assistance of the other firefighter.

7. Three Firefighter Raise

a. Heel position

1. Place the ladder butt end on the ground when the desired location for the raise has been reached.
2. Heel the ladder by standing on the bottom rung, crouch down, and grasp a convenient rung with both hands, and lean back.
3. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
4. Steady the ladder.
5. Place one foot against a butt spur, or on the bottom rung, and grasp the beam or a convenient rung to lower the ladder.
6. Assist in gently lowering the ladder into the building.

b. Tip Position #1

1. Rest the ladder flat on one shoulder.
2. Visually check the area overhead for obstructions before bringing the ladder to a vertical position.
3. Visually check the terrain before stepping forward.
4. Advance in unison with other tip person, with the outside hands on the beams and inside hands on the rungs, until the ladder is in a vertical position.
5. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
6. Grasp the halyard and extend the fly with a hand-over-hand motion.
7. Check to make sure that the ladder locks are in place when the tip is at the desired elevation.
8. Steady the ladder from the inside position.
9. Assist in gently lowering the ladder into the building.

c. Tip Position #2

1. Rest the ladder flat on their shoulders.
2. Visually check the area overhead for obstructions before bringing the ladder to a vertical position.
3. Visually check the terrain before stepping forward.
4. Advance in unison with the other tip person, with their outside hands on the beams and inside hands on the rungs until the ladder is in a vertical position.
5. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
6. Steady the ladder.
7. Place one foot against a butt spur, or on the bottom rung, and grasp the beam, or a convenient rung, to lower the ladder.
8. Assist in gently lowering the ladder into the building.

8. Four-Firefighter Flat Raise

a. Heel Position #1

1. Place the ladder butt on the ground when the desired location to raise the ladder is reached.
2. Heel the ladder by placing their inside foot on the bottom rung and their outside foot on the ground outside the beam.
3. Grasp a convenient rung with the inside hand and the beam with the other hand and pull back.
4. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
5. Extending the fly section alone with other heel, firefighters grasp the halyard using hand-over-hand motion, pulling the halyard. If both do this, they must coordinate their actions so as not to drop the fly section accidentally
6. Make sure that the ladder locks are in place when the tip is at the desired elevation.
7. Assist in gently lowering the ladder into the building.

b. Heel Position #2

1. Place the ladder butt on the ground when the desired location to raise the ladder is reached.

2. Heel the ladder by placing their inside foot on the bottom rung and the outside foot on the ground outside the beam.
3. Grasp a convenient rung with the inside hand and the beam with the other hand and pull back.
4. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
5. Extending the fly section alone with other heel, firefighters grasp the halyard using hand-over-hand motion, pulling the halyard. If both do this, they must coordinate their actions so as not to drop the fly section accidentally.
6. Make sure that the ladder locks are in place when the tip is at the desired elevation.
7. Assist in gently lowering the ladder into the building.

c. Tip Position #3

1. Rest the ladder flat on their shoulder.
2. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
3. Visually check the terrain before stepping forward.
4. Advance in unison, with the other firefighter using the outside hands on the beams and inside hands on the rungs, until the ladder is in a vertical position.
5. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
6. Lower the ladder by placing the inside foot against the butt spur or bottom rung and grasping the beams.

d. Tip Position #4

1. Rest the ladder flat on the shoulders.
2. Visually check the area overhead for obstructions before bringing the ladder to a vertical position.
3. Visually check the terrain before stepping forward.
4. Advance in unison, with the other firefighter using the outside hands on the beams and inside hands on the rungs until the ladder is in a vertical position.
5. Assist in pivoting the ladder to position the fly section away from the building, if necessary.
6. Lower the ladder by placing the inside foot against the butt spur or bottom rung and grasp the beams.

9. One-Firefighter Folding/Attic Ladder

    a. Remove attic/folding ladder for apparatus bracket.
    b. Carry ladder to location of use.
    c. Unfold ladder and verifies lock is set.
    d. Raise ladder to the vertical position and place in scuttle opening.

IX: Identify climbing the full length of each type of ground and aerial ladder available to the fire department. **2-6.9** (*3-3.5(b), 3-3.9(b))*

A. Climbing Ladders

1. Check to make sure ladder has been positioned for proper climbing angle.
2. Check to make sure ladder is properly secured.
3. Keep eyes focused forward, with an occasional glance at the tip of the ladder.
4. Keep arms straight during the climb.
5. Grasp the rungs with the palm down and the thumb beneath the rung.
6. Grasp either every rung with alternate hands while climbing or grasp alternate rungs.
7. As an option for hand placement when climbing, the firefighter may climb with both hands sliding up behind the beams to maintain constant contact, as when climbing and carrying equipment.
8. All upward progress is done with the leg muscles.
9. The arms and hands do not reach upward during the climb.
10. Bend the knees while climbing.
11. Climb is accomplished smoothly and with rhythm.

X. Identify tool carries while ascending and descending ladders. **2-6.10 (***3-3.5, 3-3.11***)**

A. Tool carries up a ladder

1. Slide the free hand under the beam while making the climb.
2. Slide the hand under the tool along the beam if the hands are large enough.
3. Climb the ladder smoothly.

XI. Identify the procedures for moving "injured" people down a ladder. 2-6.11 (*3-3.8(b)*)

A. Assisting a conscious victim down a ladder

1. Receive the victim's feet first from the firefighter in the building, making sure the victim is facing the ladder.
2. Place both arms around the victim, under the armpits, with hands on the rungs in front of the victim.
3. Descend the ladder first, prepared to "receive" the victim.
4. Reassure the victim constantly while descending the ladder.

B. Assisting an unconscious victim down a ladder. (Method #1)

1. Receive the victim feet first from the firefighter in the building, making sure the victim is facing the ladder. (Victim may also be positioned facing away from the ladder to prevent entanglement of their limbs.)
2. Place both arms around the victim, under the armpits, with hands on the rungs in front of the victim and resting the victim's body on the knee.
3. Place the victim's feet outside the rails to prevent entanglement.

C. Assisting an unconscious victim down a ladder (Method #2)

1. Receive the victim feet first from the firefighter in the building, making sure the victim is facing away from the ladder.
2. Place the victim's knees over the shoulders.
3. The victim's armpits are supported by the rescuer's forearms.
4. Lean in toward the ladder to slow the process in order to increase control over the victim.
5. Descend the ladder rung by rung, while sliding the hands down the beams.

XII. Identify the procedures for working off ladders using appropriate safety devices and leg locks. 2-6.12 (*3-3.8(b), 3-3.9(b), 3-3.11(b*))

A. Working on a ground ladder

1. Climb to the desired height.
2. Advance one rung higher.
3. Slide the leg opposite the working side over and behind the rung that they will lock into.
4. Hook the foot either on the rung or behind the beam.
5. Rest on the thigh.

6. Step down with the opposite leg.

B. Working on a aerial ladder

1. Climb to the tip of the ladder.
2. Place your feet into the foot plates.
3. Secure the ladder harness to a truss member on the ladder.

XIII. Identify the deployment of a roof ladder on a pitched roof. **2-6.13** (*3-3.5(b)*)

A. Placing a roof ladder

1. Carry the roof ladder to the ladder that is to be ascended.
2. Set the roof ladder down and open the hooks.
3. Tilt the roof ladder up so that it rests against the other ladder with the hooks facing away from them.
4. Climb the main ladder until the shoulder is about two rungs above the midpoint of the roof ladder.
5. Reach through the rungs of the roof ladder and hoist it onto the shoulder with the hooks facing away from them.
6. Climb to the top of the ladder.
7. Use a leg lock or life safety harness to lock into the ladder.
8. Once locked in, take the roof ladder off the shoulder, and use the hand-over-hand method to push the roof ladder, with the hooks in the down position, onto the roof.
9. Push the roof ladder up the roof until the hooks go over the edge of the peak and catch solidly.
10. Remove the roof ladder by reversing the process.

XIV. Identify the procedure for cleaning ladders 2-6.14 (*3-3.5(b)*

A. Cleaning a ladder

1. Follow manufacturer's instructions.
2. Set up work area.
3. Remove any grease with solvent
4. Clean ladder with scrub brush and rinse.
5. Wipe dry
6. Lubricate moving parts, if warranted

XV. Identify the inspection procedures for different types of ground ladders. **2-6.15** (*3-5.3*)

A. Inspecting ground ladders

1. Inspect ground ladders for:

a. Rungs

1) Tightness
2) Cracks
3) Dents
4) Slivers

b. Bolts, rivets and welds

1) Tightness
2) Cracks or defects

c. Beams and Rungs

1) Cracks
2) Splinters
3) Breaks
4) Gouges
5) Checks
6) Wavy conditions
7) Deformities
8) Heat indicator color changes

2. Inspect extension ladders for:

a. Pawl assemblies: working properly
b. Halyard: fraying or kinking
c. Moving parts: move freely
d. Staypole toggle: condition and operation
e. Latches: free operation

3. Inspect roof ladders for:

a. Rust
b. Deformed or malfunctioning hooks
c. Hooks firmly attached: no sign of looseness

XVI. Identify maintenance procedures for different types of ground ladders. **2-6.16** *(3-3.5(b))*

A. Maintenance of ground ladders

1. Keep clean and free of moisture.
2. Do not store or rest ladders near exhaust or other heat sources.
3. Do not store ladders where they are exposed to the elements.
4. Do not paint ladders except for top and bottom 12" for visibility.
5. Notify trained ladder technician of needed repair(s).

XVII. Demonstrate the following firefighter carries, using ground ladders. 2-6.17 (*3-3.5(b), 3-3.11(b)*)

A. One Firefighter Low Shoulder Method from the apparatus 2-6.17.1

1. Selects a balance point near the center of the ladder.
2. Faces toward the butt and inserts one arm between the beams.
3. Rests the upper beam on the shoulder
4. Steadies the ladder with both hands.
5. Lowers the butt (front) end slightly for better balance and vision during the carry.

B. One Firefighter Low Shoulder Carry from the ground 2-6.17.1

1. Faces toward the tip
2. Crouches beside the ladder
3. Grasps the middle rung with your hand nearest the ladder.
4. Stands, using the leg muscles and keeping the back straight and vertical.
5. As the ladder is brought up, pivots into the ladder, and inserts the other arm through the rungs so that the upper beam rests on the shoulder.
6. Faces toward the butt
7. Steadies the ladder
8. Lowers the butt (front) end slightly.

C. One Firefighter High Shoulder Method 2-6.17.2

1. Face the butt off the ladder
2. At the balance point, places the palm of one hand under the bottom beam and the palm of the other hand on the top beam.
3. Lifts the ladder
4. Rests the lower beam on the shoulder
5. Lowers the butt end slightly
6. Holds the upper beam with one hand, palm down

D. Two Firefighter Low Shoulder Method (from Vertical Racking) 2-6.17.3

1. The two firefighters stand facing the ladder
2. One firefighter (each) positions him/herself either at the tip or the butt end of the ladder.
3. Each firefighter uses both hands to grasp the ladder to remove it from the rack.
4. As soon as the ladder clears the rack, the firefighters continue to grasp the ladder with the hand nearest the butt end while they place the other arm between two rungs.
5. They then pivot, and bring the upper beam onto the shoulder.
6. The firefighter at the butt end uses one hand to push people out of the way to prevent them from being struck by the butt spur.

E. Two Firefighter Low Shoulder Method (from Flat Racking) 2-6.17.3
(Firefighter at the heel of the ladder should give all commands.)

1. As the ladder clears the rack, each firefighter grasps two rungs holding the ladder flat.
2. For ladders stored at or above shoulder level, the outside beam is lowered and the inside beam raised to the shoulder simultaneously with each firefighter pivoting and placing the arm farthest from the butt end between two rungs. If the ladder is stored below shoulder level, raise the outside beam and lower the inside one.
3. The upper beam of the ladder should now be on the firefighter's shoulders with the firefighters facing the butt end.

F. Two Firefighter Low Shoulder Method (from the Ground) 2-6.17.3
(Firefighter at the heel of the ladder should give all commands)

1. Two firefighters position themselves on the same side of the ladder; one near the tip and the other near the heel end.
2. Each kneels next to the ladder facing the tip end.
3. Each grasps a convenient rung with the near hand, palm forward.
4. Firefighter, at the heel, gives the command to "shoulder the ladder."
5. Both stand up, using the leg muscles to lift the ladder.
6. As the ladder and the firefighters rise, the far beam is tilted upward and the firefighters pivot and place the free arm between two rungs.
7. The firefighters place the upper beam on the shoulders, facing the butt end.

G. Three Firefighter Flat Shoulder Method (from Flat Racking) 2-6.17.4

1. As the ladder is pulled from the rack, two firefighters position themselves on one side of the ladder near each end and the other at midpoint on the opposite side.
2. All grasp the rungs and beam.
3. Lifts the ladder clear of the apparatus and prepare to pivot toward the butt end.
4. Raise the ladder to shoulder height, while pivoting and place the beam upon the shoulders.

H. Three Firefighter Flat Shoulder Method (from the Ground) 2-6.17.4
(Firefighter at the heel fives the commands)

1. Position themselves at one of the following positions: one side of the ladder near each end or at mid point on the opposite side.
2. Faces the tip end and kneel so that his/her back is straight and the knee closest to the ladder is one touching the ground.
3. Grasps the beam with the hand closest to the ladder.
4. Gives the command "prepare to shoulder the ladder"
5. Gives the command "shoulder the ladder" when everyone is ready.
6. Stands up, using their leg muscles to lift the ladder.
7. Pivots toward the butt end.
8. Places the beam upon the shoulders while facing the butt end.

I. Three Firefighter Flat Arm's Length Method 2-6.17.5
(Firefighter at the heel gives the commands)

1. Two firefighters position themselves on one side of the ladder near each end and the other midpoint on the opposite side.
2. All three firefighters face the butt of the ladder.
3. All kneel beside the ladder with the knee closest to the ladder touching the ground.
4. Grasps the beam.
5. Gives the command to "pick up the ladder".
6. Stands, using the leg muscles, to lift the ladder to the arm's length position.

J. Four Firefighter Arm's Length Method 2-6.17.6
(Firefighter on the right side of the heel gives the commands)

1. Two firefighters position themselves near each end of the ladder on opposite sides.
2. All four firefighters face the butt of the ladder.
3. All kneel beside the ladder with the knee closes to the ladder touching the ground.

4. All grasp the beam
5. Gives the command to "pick up the ladder".
6. All stand, using their leg muscles, to lift the ladder to the arm's length position.

K. Ladder placement for ventilation 2-6.17.7

1. Positions the ladder alongside the window to the windward side with the tip about even with the top of the window
2. Places the heel of the ladder a distance of ¼ the used height from the building
3. Checks climbing angle by standing on the bottom rung and grabbing the rung directly in front of them, while standing up, arms extended straight out in front

L. Ladder placement for rescue from a window 2-6.17.8

1. Places the ladder tip even with or slightly below the sill. If the window opening is wide enough to permit placing the ladder inside the window opening and sill leave room beside it to facilitate the rescue, places it so that two or three rungs extend above the sill.
2. Checks climbing angle by standing on the bottom rung and grabbing the rung directly in front of them, while standing straight up, arms extended straight out in front

M. Ladder placement for hose stream deployment 2-6.17.9

1. Raises ladder directly in front of the window with the tip on the wall above the window opening
2. Checks climbing angle by standing on the bottom rung and grabbing the rung directly in front of them, while standing straight up, arms extended straight out in front

XVIII. Demonstrate positioning, raising, and lowering the following ground ladders for rescue, ventilation, and hose deployment: 2-6.18 (*3-3.5(b), 3-3.8(b), 3-3.11(b)*)

2-6.18.1 14-foot single or wall ladder
2-6.18.2 24-foot extension ladder
2-6.18.3 35-foot extension ladder
2-6.18.4 Folding/attic ladder

A. One Firefighter Single Ladder Raise

1. Lowers the butt end to the ground.
2. Simultaneously raises the ladder to a vertical position.
3. Grasps both beams, heels the butt end of the ladder, and lowers it onto the building.

B. One Firefighter Extension Ladder Raise

1. Lowers the butt to the ground at a point determined for establishing the proper climbing angle.
2. Visually checks for obstructions before bringing the ladder to a vertical position.
3. As the ladder is brought to a vertical position, pivots the ladder 90 degrees.
4. Takes a position facing the ladder on the side away from the building.
5. Prepares to extend the ladder by placing one foot at the butt on one beam, and with the instep, knee and leg, steadies the ladder.
6. Grasps the halyard and extend the fly section with a hand-over-hand motion.
7. Checks to make sure that the ladder locks are in place, when the tip is at the desired elevation.
8. Prepares to lower the ladder by placing at least one foot against a butt spur or on the bottom rung while grasping the breams.
9. Gently lowers the ladder into the building.
10. Rolls the ladders over to position the ladder with the fly section out.

C. Tying the Halyard

1. Wraps the excess halyard around two convenient rungs.
2. Pulls it taut
3. Holds the halyard between the thumb and forefinger with the palm down.

4. Turns the hand palm up and push the halyard underneath and back over the top of the rung.
5. Grasps the halyard with the thumb and fingers, and pulls it through the loop making a clove hitch.
6. Finishes the tie by making a half hitch or overhand safety on top of the clove hitch.

D. One-Firefighter Raise from the Low Shoulder Carry

1. Places the butt end of the ladder on the ground with the butt spurs against the wall of the building.
2. With a free hand, grasps a rung in front of the shoulder, while removing the opposite arm from between the rungs.
3. Steps beneath the ladder and grasps a convenient rung with the other hand.
4. Visually checks for obstructions before bringing the ladder to a vertical position.
5. Visually check the terrain in front of them before stepping forward.
6. Advances hand-over-hand down the rungs toward the butt until the ladder is in a vertical position.
7. Extends the ladder by pulling the halyard straight down until the ladder has been raised to the desired level.
8. Checks to make sure the pawls are engaged.
9. Positions the ladder for climbing by pushing against an upper rung with one hand to keep the ladder against the building.
10. Grasps a lower rung with the other hand and carefully moves the ladder butt out from the building to the desired location.
11. Rolls the ladder to bring the fly to the out position, if necessary.

E. Two Firefighter Flat Raise

1. Heel position

    a. Places the ladder but end on the ground while the firefighter at the tip rests the ladder beam on a shoulder, when the desired location for the raise has been reached.
    b. Heels the ladder by standing on the bottom rung, crouches down to grasp a convenient rung or the beams with both hands, and leans back.
    c. As the ladder comes to a vertical position, grasps successively higher rungs or higher on the beams until the firefighter is standing upright.
    d. Faces the other firefighter and heels the ladder by placing the toes against the same beam.
    e. Assists in pivoting the ladder to position the fly away from the building, if it is not already in position.

f. Places one foot against a butt spur, or on the bottom rung, and grasps the beams.
g. Gently lowers the ladder into the building with the assistance of the other firefighter.

2. Tip position

a. Rests the ladder beam on a shoulder, while the other firefighter places the ladder butt end on the ground when the desired location for the raise has been reached.
b. Steps beneath the ladder and grasps a convenient rung with both hands while the other firefighter heels the ladder.
c. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
d. Visually checks the terrain before stepping forward.
e. Advances hand-over-hand down the rungs toward the butt end until the ladder is in a vertical position.
f. Faces the other firefighter and heels the ladder by placing the toes against the same beam.
g. Assists in pivoting the ladder to position the fly away from the building, if it is not already in that position. (When the ladder is pivoted, the firefighters will move as a group with the ladder. They will not just "pass" the ladder as it is pivoted.)
h. Grasps the halyard and extend the fly section with a hand-over-hand motion.
i. Checks to make sure the ladder locks are in place when the tip is at the desired elevation.
j. Gently lowers the ladder into the building with the assistance of the other firefighter.

F. Two Firefighter Beam Raise

1. Heel position

a. Places the ladder beam on the ground when the desired location has been reached.
b. Places one foot on the lower beam at the butt spur.
c. Assists in pivoting the ladder to position the fly away from the building if it is not already in position.
d. Places one foot against a butt spur, or on the bottom rung, and grasps the rung or beams.
e. Gently lowers the ladder into the building with the assistance of the other firefighter.

2. Tip position

    a. Rests the beam on one shoulder while the firefighter at the heel places one foot on the lower beam at butt spur.
    b. Grasps the upper beam with hands apart, the other foot extended back to act as a counter balance.
    c. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
    d. Visually checks terrain before stepping forward.
    e. Advances hand-over-hand down the beam toward the butt until the ladder is in a vertical position.
    f. Grasps the halyard and extend the fly section with a hand-over-hand motion.
    g. Checks to make sure the ladder locks are in place when the tip is at the desired elevation.
    h. Gently lowers the ladder into the building with the assistance of the other firefighter.

G. Three Firefighter Raise

1. Heel position

    a. Places the ladder butt end on the ground when the desired location for the raise has been reached.
    b. Heels the ladder by standing on the bottom rung, crouch down, and grasping a convenient rung with both hands, and lean back.
    c. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
    d. Steadies the ladder.
    e. Places one foot against a butt spur, or on the bottom rung, and grasps the beam or a convenient rung to lower the ladder.
    f. Assists in gently lowering the ladder into the building.

2. Tip Position #1

    a. Rests the ladder flat on one shoulder.
    b. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
    c. Visually checks the terrain before stepping forward.
    d. Advances in unison with other tip person, with the outside hands on the beams and inside hands on the rungs, until the ladder is in a vertical position.

e. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
f. Grasps the halyard and extend the fly with a hand-over-hand motion.
g. Checks to make sure that the ladder locks are in place when the tip is at the desired elevation.
h. Steadies the ladder from the inside position.
i. Assists in gently lowering the ladder into the building.

3. Tip Position #2

a. Rests the ladder flat on their shoulders.
b. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
c. Visually checks the terrain before stepping forward.
d. Advances in unison with the other tip person, with their outside hands on the beams and inside hands on the rungs until the ladder is in a vertical position.
e. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
f. Steadies the ladder.
g. Places one foot against a butt spur, or on the bottom rung, and grasps the beam, or a convenient rung, to lower the ladder.
h. Assists in gently lowering the ladder into the building.

H. Four-Firefighter Flat Raise

1. Heel Position #1

a. Places the ladder butt on the ground when the desired location to raise the ladder is reached.
b. Heels the ladder by placing their inside foot on the bottom rung and their outside foot on the ground outside the beam.
c. Grasps a convenient rung with the inside hand and the beam with the other hand and pull back.
d. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
e. Extending the fly section alone with other heel, firefighters grasp the halyard using hand-over-hand motion, pulling the halyard. If both do this, they must coordinate their actions so as not to drop the fly section accidentally.
f. Makes sure that the ladder locks are in place when the tip is at the desired elevation.
g. Assists in gently lowering the ladder into the building.

2. Heel Position #2

    a. Places the ladder butt on the ground when the desired location to raise the ladder is reached.
    b. Heels the ladder by placing their inside foot on the bottom rung and the outside foot on the ground outside the beam.
    c. Grasps a convenient rung with the inside hand and the beam with the other hand and pulls back.
    d. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
    e. Extending the fly section alone with other heel, firefighters grasp the halyard using hand-over-hand motion, pulling the halyard. If both do this, they must coordinate their actions so as not to drop the fly section accidentally.
    f. Makes sure that the ladder locks are in place when the tip is at the desired elevation.
    g. Assists in gently lowering the ladder into the building.

3. Tip Position #3

    a. Rests the ladder flat on their shoulder.
    b. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
    c. Visually checks the terrain before stepping forward.
    d. Advances in unison, with the other firefighter using the outside hands on the beams and inside hands on the rungs, until the ladder is in a vertical position.
    e. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
    f. Lowers the ladder by placing the inside foot against the butt spur or bottom rung and grasping the beams.

4. Tip Position #4

    a. Rests the ladder flat on the shoulders.
    b. Visually checks the area overhead for obstructions before bringing the ladder to a vertical position.
    c. Visually checks the terrain before stepping forward.
    d. Advances in unison, with the other firefighter using the outside hands on the beams and inside hands on the rungs until the ladder is in a vertical position.
    e. Assists in pivoting the ladder to position the fly section away from the building, if necessary.
    f. Lowers the ladder by placing the inside feet against the butt spur or bottom rung and grasping the beams.

J. One-Firefighter Folding/Attic Ladder

1. Removes attic/folding ladder from apparatus bracket.
2. Carries ladder to location of use
3. Unfolds ladder and verifies lock is set.
4. Raises ladder to the vertical position and places in scuttle opening.

XIX: Demonstrate climbing the full length of each type of ground and aerial ladder available to the fire department. 2-6.19 (*3-3.5(b), 3-3.9(b)*)

A. Climbing Ladders

1. Checks to make sure ladder has been positioned for proper climbing angle.
2. Checks to make sure ladder is properly secured.
3. Keeps eyes focused forward, with an occasional glance at the tip of the ladder.
4. Keeps arms straight during the climb.
5. Grasps the rungs with the palm down and the thumb beneath the rung.
6. Grasps either every rung with alternate hands while climbing or grasp alternate rungs.
7. As an option for hand placement when climbing, the firefighter may climb with both hands sliding up behind the beams to maintain constant contact, as when climbing and carrying equipment.
8. All upward progress is done with the leg muscles.
9. The arms and hands do not reach upward during the climb.
10. Bends the knees as he/she climbs.
11. Climb is accomplished smoothly and with rhythm.

XX. Demonstrate tool carries while ascending and descending ladders. 2-6.20 (*3-3.11(b)*)

A. Tool carries up a ladder

1. Slides the free hand under the beam while making the climb.
2. Slides the hand under the tool along the beam if the hands are large enough.
3. Climbs the ladder smoothly.

XXI. Demonstrate moving "injured" people down a ladder. 2-6.21 (*3-3.8(b)*)

A. Assisting a conscious victim down a ladder

1. Receives the victim's feet first from the firefighter in the building, making sure the victim is facing the ladder.
2. Places both arms around the victim, under the armpits, with hands on the rungs in front of the victim.
3. Descends the ladder first, prepared to "receive" the victim.
4. Reassures the victim constantly while descending the ladder.

B. Assisting an unconscious victim down a ladder. (Method #1)

1. Receives the victim feet first from the firefighter in the building, making sure the victim is facing the ladder. (Victim may also be positioned facing away from the ladder to prevent entanglement of their limbs.)
2. Places both arms around the victim, under the armpits, with hands on the rungs in front of the victim and resting the victim's body on the knee.
3. Places the victim's feet outside the rails to prevent entanglement.

C. Assisting an unconscious victim down a ladder (Method #2)

1. Receives the victim feet first from the firefighter in the building, making sure the victim is facing away from the ladder.
2. Places the victim's knees over the shoulders.
3. The victim's armpits are supported by the rescuer's forearms.
4. Leans in toward the ladder to slow the process in order to increase control over the victim.
5. Descends the ladder rung by rung, while sliding the hands down the beams.

XXII. Demonstrate working off ladders using appropriate safety devices and leg locks. 2-6.22 (*3-3.8(b), 3-3.9(b), 3-3.11(b*))

A. Working on a ground ladder

1. Climbs to the desired height.
2. Advances one rung higher.
3. Slides the leg opposite the working side over and behind the rung that they will lock into.
4. Hooks the foot either on the rung or behind the beam.
5. Rests on the thigh.
6. Steps down with the opposite leg.

B. Working on a aerial ladder

1. Climbs to the tip of the ladder.
2. Place his/her feet into the foot plates.
3. Secures the ladder harness to a truss member on the ladder.

XXIII. Demonstrate the deployment of a roof ladder on a pitched roof. 2-6.23 (*3-3.5(b)*)

A. Placing a roof ladder

1. Carries the roof ladder to the ladder that is to be ascended.
2. Sets the roof ladder down and opens the hooks.
3. Tilts the roof ladder up so that it rests against the other ladder with the hooks facing away from them.
4. Climbs the main ladder until the shoulder is about two rungs above the midpoint of the roof ladder.
5. Reaches through the rungs of the roof ladder and hoists it onto the shoulder with the hooks facing away from them.
6. Climbs to the top of the ladder.
7. Uses a leg lock or life safety harness to lock into the ladder.
8. Once locked in, takes the roof ladder off the shoulder, and uses the hand-over-hand method to push the roof ladder, with the hooks in the down position, onto the roof.
9. Pushes the roof ladder up the roof until the hooks go over the edge of the peak and catch solidly.
10. Removes the roof ladder by reversing the process.

XXIV. Demonstrate the procedure for cleaning ladders 2-6.24 (*3-3.5(b)*

A. Cleaning a ladder

1. Follows manufacturer's instructions.
2. Sets up work area.
3. Removes any grease with solvent.
4. Cleans ladder with scrub brush and rinse.
5. Wipes dry
6. Lubricates moving parts if warranted

XXV. Demonstrate the inspection procedures for different types of ground ladders. 2-6.25 (*3-5.3*)

A. Inspecting ground ladders

1. Inspects ground ladders for:

a. Rungs

1) Tightness
2) Cracks
3) Dents
4) Slivers

b. Bolts, rivets and welds

1) Tightness
2) Cracks or defects

c. Beams and Rungs

1) Cracks
2) Splinters
3) Breaks
4) Gouges
5) Checks
6) Wavy conditions
7) Deformities
8) Heat indicator color changes

2. Inspects extension ladders for:

a. Pawl assemblies: working properly
b. Halyard: fraying or kinking
c. Moving parts: move freely
d. Staypole toggle: condition and operation
e. Latches: free operation

3. Inspects roof ladders for:

a. Rust
b. Deformed or malfunctioning hooks
c. Hooks firmly attached; no sign of looseness

XXVI. Demonstrate maintenance procedures for different types of ground ladders. 2-6.15 ***(3-3.5(b))***

A. Maintenance of ground ladders

1. Keeps clean and free of moisture.
2. Does not store or rest ladders near exhaust or other heat sources.
3. Does not store ladders where they are exposed to the elements.
4. Does not paint ladders except for top and bottom 12” for visibility.
5. Notifies trained ladder technician of needed repairs.